THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

NEW SERIES.] THURSDAY, APRIL 11, 1872. [VOL. IX.—No. 15.

Original Communications.

DYSMENNORRHŒA CAUSED BY A POLYPUS OF THE UTERUS. PREGNANCY AND ABORTION.

By FRANK WELLS, M.D., Professor of Obstetrics and Diseases of Women and Children, Cleveland Medical School.

MRS. G., a stout, healthy woman 35 years of age and the mother of four children, began to suffer two and a half years ago from slight spasmodic pains over the pelvis at each menstrual period. This pain commenced on the first day of the epoch, and lasted until a copious discharge took place, when it almost entirely ceased, being renewed, however, at various intervals throughout the menstruation. She had no pain in the intervals of menstruation, nor was there any discharge from the vagina. The menstrual flow was somewhat increased, but by no means profuse, if the word of the patient can be credited. Her general health was very good, the only trouble being the dysmenorrhœa, which, however, was so slight that she had never consulted a physician for its relief.

This dysmenorrhœal condition lasted for seventeen months, at the end of which time it disappeared, coincident with the cessation of menstruation and the development of other early symptoms of pregnancy. At the end of the third month of pregnancy, an abortion was brought on by the patient taking, for this purpose, during a period of two weeks, six fluid ounces of a decoction of the root of the cotton plant, in divided doses, a drug which she had successfully used for a like purpose on two former occasions. At the expiration of the two weeks, uterine pains came on while the patient was standing, and a fœtus with its envelopes was expelled on to the floor. This fact was vouched for by the physician who was summoned to attend her. She lost but little blood at the time, but what little flow there was continued unceasingly. This fact obliged her, at the end of ten days, to again call in a physician, who found the vagina partially filled with clots, and a highly offensive sanguineous discharge taking place from it. She was ordered, without any further examination being made, acetate of lead internally, vaginal injections of a weak solution of carbolic acid, and, as her strength was somewhat impaired, iron internally as a tonic. Under this treatment the discharge became slightly diminished and its offensiveness removed; but as she still continued to flow unceasingly, I was summoned in consultation.

From the history of the case, I confidently expected to find a retention of some portion of the membranes, and consequently my surprise was great, on making a digital examination in order to ascertain the condition of the os, before introducing a sponge tent, to discover a firm mass of the size of a hen's egg, protruding from the os externum, completely filling up the upper portion of the vagina, and extending upwards through the os into the cervix. How much further than this it extended I was unable by my finger to detect, since the os, which was dilated to the size of a silver quarter of a dollar, encircled the mass so firmly that it was impossible to insert my finger between them.

Next introducing Sims's speculum, I perceived an ovoid, smooth and glistening body, from the outer surface of which blood was exuding, occupying the position described above. For a moment I thought it might be an inverted uterus, particularly as the history of the violent expulsion of the fœtus from the uterus, the woman standing up at the time and suddenly fainting (a circumstance which I have omitted to mention before), seemed to favor such a supposition; and, moreover, since it seemed strange to me that a polypus of this size, which was the only other condition admissible, should not have long before produced more decided symptoms, which would have led to its recognition. Again, the fact that the woman had been recently pregnant seemed to militate against the diagnosis of

polypus, since it was difficult to imagine that the spermatozoa could have passed such an obstruction as this mass presented, whether it originally occupied its then present position, or had been developed in the uterine cavity and been subsequently expelled by the same uterine contractions which expelled the fœtus. The sound, however, quickly set any doubts which I may have had at rest, for on its introduction into the uterus, an operation which was accomplished with much difficulty on account of the close investment of the mass by the os, it was found to penetrate two and three quarters inches to the fundus. This circumstance, of course, removed all idea of inversion and established the diagnosis of polypus. On sweeping the sound around, the tumor was found to be attached by a pedicle of about, as far as I could judge, the size of the middle finger, to the uterine wall of the right side, a short distance above the os internum.

Without placing the patient under ether, as these tumors are seldom possessed of any amount of sensibility, I immediately proceeded to the removal of the mass. For this purpose I seized the tumor with a pair of stout forceps and forcibly dragged it further down into the vagina; then giving the forceps to an assistant to hold, and directing him to keep up a forcible traction, I slipped the chain of an ecraseur over the pedicle, as far up into the cervix as was possible, and by a few turns of the instrument succeeded in cutting through the attachment and removing the polypus. Considerable hæmorrhage followed the operation, which was controlled, however, by a pledget of cotton soaked in a solution of persulphate of iron—one part to four of water—applied to the bleeding surface. Over this a dressing of dry cotton was laid, and the woman placed in bed, which she was directed to keep for three days. On the following day the dry dressing was removed, and vaginal injections of a solution of carbolic acid—one part to forty parts of water—were ordered to be thrown up against the os twice a day. As the patient complained of considerable uterine pain, I directed warm fomentations to be applied over the region of the uterus, and ordered her a rectal suppository composed of ext. hyoscyami, grs. iij.; ext. belladonnæ, gr. ss.; cacoa butter, q. s. M.

This was effectual in relieving all distress, and on the third day, though contrary to orders, she got up from bed and performed some light household duties, the persulphate of iron dressing still being retained. Owing to my neglect to forewarn her that this dressing would be expelled with some uterine contractions, an amusing occurence, though to her mind a distressing one, occurred on the evening of the third day. Experiencing slight uterine pains, which were followed by the expulsion of the cotton pledget, she became seriously alarmed, and, hastily summoning her physician, proclaimed to him that "another child had come away," and it was only after great difficulty that he succeeded in convincing her of her ludicrous mistake.

Without complications, and without further treatment, excepting the administration of tonics, the patient made a speedy recovery, and has since menstruated without the slightest discomfort.

I have reported this case, neither because it was of any magnitude nor because the operation was attended with any great amount of difficulty, but because it is interesting to know how sometimes quite serious morbid conditions may be masked by the paucity and lightness of their symptoms; and also to show what obstacles to their ingress into the uterus, the spermatozoa will overcome in order to reach the ovum. I am well aware that uterine polypi sometimes occur with only symptoms of dysmenorrhœa to indicate their presence, but why in this particular instance the dysmenorrhœal symptoms should have been so slight, it is difficult to comprehend, since the polypus, which undoubtedly was originally developed in the uterine cavity, and attached by a pedicle sufficiently long to allow of its expulsion into the vagina at the time of the abortion, must have formed a considerable obstruction to the passage of the menstrual discharge.

In connection with this case it may not be inappropriate to quote another, which was related a few years since by Prof. Braun, of Vienna, in one of his lectures, in order to show through how small an aperture the spermatozoa will find their way into the uterus. The case, as far as I recollect it at this late day, was as follows: Some years previous, a woman was brought into the lying-in wards by her husband, with the statement that she was in the sixth month of her pregnancy, a condition which neither of them could understand, since the man had never been able to introduce his penis into the vagina. On examination, it was discovered that the vagina was represented by a narrow canal, not as large, to quote Dr. Braun's exact words, as the penis of a gander, which of course prevented complete sexual intercourse; and yet there

were unmistakable proofs that the woman was really pregnant. Under the circumstances, the only thing to be done was, in order to avoid Cæsarean section, to make a new vagina, or rather to enlarge the representative of the one already existing. This was done by incisions carried to the depth of half an inch, at which point the narrow canal was found to terminate in a vagina, perfectly normal in all particulars. The operation was successful in creating a good vagina throughout its entire length, through which, at full term, a small, but fully developed, living child was delivered without assistance. In two years after this event, the woman, who had again become pregnant, was delivered of a living child without any complication whatsoever.

PROLONGED USE OF HYPODERMIC INJECTIONS OF MORPHIA.

By Robert M. Otis, M.D., Cambridge.

Mrs. H., 29 years old, was taken, July, 1867, with a severe, dull pain in the abdomen, which was somewhat relieved temporarily by from three to six discharges, daily, of nearly a cupful of matter, apparently pus, from the rectum. After these discharges had continued six weeks, laudanum injections were ordered, and after two injections the discharge and pain ceased.

In the third week of August, sharp pains commenced about the right hip-joint, and extended along the thigh, interfering with walking. Soon the leg commenced to draw up, and by the last of August the foot could not be put to the floor. The pain about the hip-joint continued four months, with feverishness, headache and vomiting. Then an abscess began to discharge at the right groin, and continued to discharge two weeks. After this the patient improved, had a good appetite, could sit up, and touch the floor with her toes. A month later, pains came on again about the right hip-joint, much more severe in their character than before. No sleep was obtained for ten days. At this time, Feb., 1868, daily hypodermic injections of one-eighth of a grain of sulph. morphiæ were begun; soon were increased to three or four daily, and in fifteen or twenty days the amount of sulph. morphiæ injected daily was increased to sixteen grains. When the pains came on the second time, the leg began to draw up and later to roll out, and soon reached a position at nearly a right angle with the body, where it is now firmly anchylosed. In February, a second abscess discharged for a short time. From February, 1868, till now (Feb. 1872), the hypodermic injections have been continued daily without a single exception, and save the first few days, the amount injected has varied from two and a half to sixteen grains daily. The morphine was first injected into the arms, then for a time into the left leg, but for the greater part of the four years into the right leg. Every point injected becomes a suppurating ulcer; at first very small, it increases in size and sometimes attains a diameter of an inch. The upper surface of the right leg from groin to ankle is entirely covered with scabs, scars and running sores. The upper surface of the left leg from groin to knee has not a piece of natural skin the size of a pin's head.

At present, two and one-half grains are injected morning and night. Occasionally, as at the menstrual periods, and times of excitement, an extra injection is made at noon. The solution, twenty grains to an ounce of water, is injected very slowly, each injection requiring a half hour. When the morphine is introduced quickly, the patient says everything stops; she feels greatly distressed; knows what is going on about her; can speak, but does not wish to; the pulse cannot be felt at the wrist; the whole surface of the body becomes intensely congested; then the lips tingle, there is a terrible roaring in the head, great oppression and violent thumping at the cardiac region. Slowly, the skin regains its natural color, and the patient is herself again.

An English writer, Dr. Wilson, says, "the most deadly faints I have ever seen were undoubtedly caused by the too rapid absorption of the narcotic, either from hurried injection, or from the accidental injury of the lymphatics, which became inflamed, and resembled cords on the skin." He mentions a case where the first few drops rapidly introduced caused nausea, which soon passed off, and then the larger residuum could be injected rapidly and safely, whereas an increase during the nausea would produce most threatening symptoms of prostration. Mrs. H. has been nauseated only once by the injection.

Anstie says, "the prolonged use of hypodermic morphia in large doses produces general enfeeblement of nervous power of all kinds; the intellect, and even more strikingly the moral energy steadily declines, and a notable degree of hypersensitiveness to trivial sources of irritation becomes more apparent from day to day.

There are changes of nutrition in the tissues; at least, I am under a strong impression that a particular kind of muscular atrophy which especially attacks the facial muscles is one of the results of large and long doses of hypodermic morphia." As long as the ulcers caused by the injections discharge pus, Mrs. H. has a good appetite, is lively, bright and amiable. A person seeing her and not knowing the history of the case, would never suspect that the patient was out of health, so cheerful and lively is she at all times. The clearness of the complexion is especially noteworthy. When the ulcers cease to discharge, the patient becomes feverish, and either vomits, coughs, or has a diarrhœa, and discharges from the stomach, bowels or lungs, matter having the same appearance as that coming from the leg. Generally, the discharge is from the stomach. The leg usually stops discharging matter every three or four months. Since last April (1871), the leg has not ceased discharging, and since the same time the patient has menstruated regularly. The discharges from the stomach, bowels or lungs have a marked connection with the amount of morphine injected, the patient requiring much less morphine after them. In a week the amount of morphine injected is reduced from sixteen grains to four or five grains daily. The amount is usually increased gradually by the necessities of the patient up to twelve, fourteen or sixteen grains, and reduced as above. The bowels never move without an enema. When the injection is delayed for a half hour beyond its usual time, the patient has severe pain and soon becomes rigid. From June 14, 1870, to December 31, 1871, eighteen and one half months, there have been injected six ounces of sulphate of morphia. This is a less amount than for any equal period of time since the injections were begun. For a long time, eight grains were injected daily, and there was another long period, during which twelve grains were injected daily, and still a third, during which sixteen grains were injected daily. It seems that eight grains would be a low average of the amount injected daily. If we take eight grains for the average daily injection, this lady has used, subcutaneously, in the last four years, at least twenty-four ounces of sulphate of morphia. At this time, after consuming such an enormous quantity, she is in better health than at any other time for the last four years. She has no desire for opium, would gladly leave off its use, and has made repeated attempts to do so, but without success. Mrs. H. shows none of the injurious effects of opium, as laid down by writers. The constipation may be ascribed to her confinement to a warm room.

Selected Papers.

THE DIAGNOSIS OF THE FIRST STAGE OF CARCINOMA COLLI UTERI, WITH REMARKS UPON ITS ANATOMY AND TREATMENT.

By Prof. Otto Spiegelberg, of Breslau. Translated for the Journal by Leonard Wheeler, M.D., Student in Breslau.

The recognition of the local commencement of cancer of the cervix uteri is, as is well known attended with difficulty, is indeed, so far as absolute certainty is concerned, regarded as impossible, especially in those cases in which the disease does not in the beginning display itself in the form of superficial growths, but rather as a circumscribed infiltration, the mucous membranes remaining intact. "Of all forms of cancer of the cervix uteri, the only ones which offer any difficulty in diagnosis are those in which the mucous membrane remains intact, or perhaps better said, only that stage of so-called cancer offers any difficulty in which disintegration has not yet appeared. In these cases, however, the difficulties are, for the most part, so considerable that a definite diagnosis can but seldom be made. Where one or more hard nodules can be felt lying under the smooth mucous covering, the diagnosis is comparatively simple and easy; but in those cases, on the contrary, in which the vaginal portion feels enlarged, smooth, hard and thickly swelled, it is impossible to distinguish cancer from simple benignant hypertrophy or from chronic metritis. Let the differential diagnosis tables as laid down in various textbooks be ever so clear and seductive, the fact still remains that in such cases in practice one is always doubtful and uncertain, even if he does leave the whole matter to the untrustworthy decision of the so-called *tactus eruditus*. It is of the utmost importance as regards the treatment, that we should recognize just these cases, in the large majority of which, so far as we can judge, a part of the vaginal portion remains healthy."* So Gusserow represents the present state of our knowledge in his otherwise excellent "Clinical Lecture on

* Volkmann's Sammlung Clin. Vorträge, No. 18.

Carcinoma Uteri." And it is this statement, with the closing reference to its important significance, which induces me to publish the following article, the substance of which I had intended to reserve for a larger work.

Extensive observation and a consideration of the anatomy of the disease have, I believe, supplied me safe signs for a differential diagnosis, in the peculiar hardness of the cancerous infiltration, in the relation of the mucous membrane to the hard mass underneath, and, finally, in the effect of dilatation by sponge tents. Since devoting my attention particularly to these points in deciding between a commencing carcinoma with unbroken mucous membrane and simple diffused or circumscribed hyperplasia, benignant infiltration, they have never failed me, though the decision was, to be sure, in consideration of the rarity of the former disease, almost always in favor of the latter.

The hardness of the cancerous deposit in comparison with the consistency of a simple induration, be it never so dense and cicatricial like, is well known; still the judgment in such a case is altogether subjective, and the bounds between the two diseases are always hard to determine. I will therefore not place this characteristic in the foreground, though for me it has always been very reliable.

The other two symptoms, on the contrary, are unequivocal, and briefly expressed are as follows:—first, the mucous membrane in a cancerous growth is firmly connected with the underlying induration and immovable over it, which is not the case in mere hyperplastic thickening and induration; and, second, while the latter, under the pressure of compressed sponge in the cervical canal, becomes regularly (even though at times inconsiderably) looser, softer and thinner, the cancerous infiltration remains unalterably hard and rigid, and cannot be stretched.

What clinical experience has thus taught is clearly explained by a consideration of the microscopic anatomy of the disease; and this compels me to make a short digression upon the development of cancer, which is the more in place as all accounts of the origin of the disease labor under the objection of indecision and incompleteness, referring, for the most part, to the manner in which it developes itself externally and other matters of only secondary importance; thus Förster's distinction of papillary and parenchymatous epithelial cancer*; the division by Blau into cancroid, as villous papillary tumor, and carcinoma as uniform infiltration of the deeper layers of the cervix†; and Gusserow's omission of any decided opinion upon the subject.‡

The results of Waldeyer's investigations, which my colleague has kindly permitted me here to anticipate, help us to a clear and satisfactory explanation of the observed phenomena. He shows that cancer of the cervix uteri is developed from the rete Malpighi of the mucous membrane, or, in extremely rare cases, from the glands of the cervical canal. The latter form of development gives rise to the alveolar or colloid carcinoma, and is, as remarked, so extremely rare that Waldeyer has had but one opportunity of examining a case of the kind. I also have seen but one. He can, therefore, accept the form originating from the rete Malpighi as the type of carcinoma uteri. As a rule, the disease is developed from the interpapillary depressions of the epithelium, and accordingly originates oftenest on or close by the lips of the os, but may, of course, appear in other places free from papillæ.

According as the growth of the epithelium into the tissues below is or is not attended by a simultaneous growth of the papillæ, two forms of cancer may be distinguished—the papillary villous (commonly called cauliflower excrescence) and the simple infiltrated form. In every case, however, the irregular epithelial growth remains the essential part of the disease.

The formation of vascular villi by the papillæ of the portio vaginalis is of secondary importance. It may precede, appear simultaneously or be a later accompaniment of the penetrating epithelial growth. In the first case the carcinomatous character of the disease begins with the commencement of the irregular abnormal (atypisch) epithelial growth; till then the villous excrescence on the vaginal portion must be considered as a simple papillary tumor, fibrous papilloma, as, in fact, such tumors of the part are regarded, and in most cases, without further complication, successfully treated.

The cases in which both epithelial growth and papillary hypertrophy appear simultaneously may perhaps be the most frequent, and accordingly all papillary vegetations of the cervix must be held in suspicion, es-

* Handb. der. Pathol. Anatomie, ii. Bd., Aufl. 2.
† Eiringer's Pathologische Anatomisches über der Aebarmutterkrebs. ‡ Loc. cit.

pecially in consideration of the possible subsequent cancerous degeneration of a previously simple papillary hypertrophy.

Carcinoma of the third description, *i. e.* that which comes to a villous growth only very late or not at all, shows itself merely in the form of circumscribed or more diffuse infiltration of the labia of the os or of the whole cervix uteri. In this form, the course of development is in brief the following: At a certain more or less well-defined point of the vaginal portion, the deeper layers of epithelium, corresponding to the rete Malpighi of the outer skin, begin to penetrate into the underlying stratum of connective tissue, the process being attended by a copious vascularization of the latter. The inward growth must naturally emanate from the deepest lying epithelial cells, viz., from the interpapillary depressions. The penetrating processes of growing epithelium press deeper and deeper inwards, thrust apart the bands of connective tissue and bundles of smooth muscular fibres, and so form an irregularly branched collection of cells, which appear as if infiltrated or, perhaps better, injected into the substance of the cervix. The last comparison is better adapted, since we in fact meet with abundant abnormal epithelial growths in the lymphatic spaces and vessels.

Since the development of cancer always begins with the abnormally rapid growth of the deeper layers of epithelium, it is very possible that the disease may be far advanced, even though the superficial epithelial layers remain entirely unchanged. Hence the frequent mention of the primary deep development of uterine cancer with an outwardly healthy mucous surface. It is a mistake, however, to fancy the epithelium entirely unconcerned in the process. In many cases, to be sure, and even at an early stage of the disease, the outer layers of epithelium are thrown off, and the beginning cancer is presented in the form of an erosion, as well as an epithelial infiltration of the submucous layers of connective tissue.

Farther, it is to be remarked that in the uterus, just as on the skin, the cancerous development may start from a small, circumscribed collection of epithelial cells, and penetrate hence inwards into the tissue, or extend outwards towards the surface.

In the first case, the disease must appear as a small, circumscribed induration (Knoten), lying deep down in the substance of the uterus; in the second, as the so-called corroding ulcer, ulcus phagedænicum or corrodens of authors.

If the disease has advanced to marked papillary growths or ulcerous disintegration, the diagnosis is comparatively easy, but even in the cases in which there is externally no disease, the immobility of the mucous membrane must be recognized as a condition in perfect conformity with the established facts in regard to the development of carcinoma.

Since the carcinomatous indurations and infiltrations owe their origin directly to the most important constituent of the mucous membrane, namely, its epithelium, and are thus intimately connected with its superficial layers, any motion of the latter upon the new growth is prevented.

The different effect of compressed sponge upon carcinoma and homoplastic induration will be understood if we consider that in the first case the diseased tissues, as if injected with wax, are filled with an inflexible mass, which deprives them of all elasticity and renders them incapable either of being stretched without rupture by the mechanical pressure of the swelling sponge, or of being softened by the fluid fluxion and exudation which the sponge indirectly incites in other conditions of structure.

In fact, these two effects of compressed sponge correspond exactly with the two conditions accompanying labor, viz., the pressure of the advancing fœtus and the attending hyperæmia; and it was, in fact, this last comparison which led me to the idea of using the sponge in the way indicated.

My first case was that of a patient whose irregularly indurated, enlarged, fissured cervix uteri had frequently been held for concerous and its extirpation recommended. The absence of carcinomatous hardness, however, and a mucous membrane entirely normal, and easily movable, except at the fissured points, aroused in my mind a doubt of the correctness of the diagnosis; and every idea of carcinoma disappeared when, the next day, after the introduction of a compressed sponge, I found the indurated and thickened portion much softer and thinner. The later history of the case confirmed the correctness of my diagnosis.

I have very often since argued in this way the absence of cancerous disease, and subsequently proved the justice of my conclusions by microscopic examination after removal of the inflamed and hyperplastic vaginal portion (an operation which is attended with immediate benefit, and is in itself without danger). If, as is true, the opposite cannot be so often proved, the difficulty lies only in the infrequency with

which cases of primary parenchymatous cancerous disease without papillary hypertrophy of the mucous membrane are observed in the beginning of their course. I have met with but two cases of the sort in all, but in both, the signs in question proved their reliableness as criteria for the differential diagnosis.

It may be objected to the use of the compressed sponge as an aid in diagnosis, that by its means the degeneration of the neoplasm, the exulceration of the cancer, will be hastened. That I allow; but, still, there is no harm done, for the extirpation must follow immediately if the disease is found to be carcinoma. It is only when done very early that the operation *can* be attended with any success; and whether a perfect cure ever results, I still very much doubt. For, even in the two above-mentioned cases, in which I recognized the disease in the first stage and operated, so far as the finger could judge, in healthy tissue, the operation was useless. The disease returned almost immediately.

The result was the same in three other cases with ulcerations and superficial growths, in which I applied the galvanocaustic wire upon a ring of apparently yet healthy tissue close up to the vaginal attachment, where, to be sure, the burned cut surface did not allow microscopical proof of transition to healthy tissue. In the first case, the wound healed well and showed no change for nearly a year, when suddenly a papillary cancerous growth developed itself with surprising rapidity from the cicatrix. In the second, new papilloma showed itself immediately upon the falling off of the slough. In the third case, after long suppuration and repeated sloughing, a tunnel-shaped cicatrix was formed in the base of the vagina, with which the cervix uteri was closely connected, and I considered the case cured. Upon examination, a year and a half after the operation, I found the cicatrix unchanged; but at present, three months later, there is developed upon the site of the old disease a superficial cancerous induration larger than a pea.

Nevertheless, I must still allow the possibility of a radical cure by early amputation. It is confirmed by the reports of perfectly reliable authors, although there are among those reported many cases of only apparent cure. Certain it is that cures are very rare, and the reason for it is probably to be found in the rapidity with which the lymphatic vessels in the neighborhood of cancer, in contrast to sarcoma, are invaded by the disease.

In the very great majority, however, of cases of carcinoma of the cervix, amputation is inadmissible. On this point I differ completely from Gusserow's too general advice* for operation.

The loss of blood upon the application of instruments and the removal of the diseased portion, is so considerable that it injures the patient more than the temporary retardation of the growth and ulceration can benefit her.

It has always seemed to me that the disease made more rapid advance after the bloody operation, and that the degeneration and disintegration became only more rapid.

If the disease is locally far advanced, the removal of the diseased portion must be accomplished with scalpel and scissors, if there is to be any prospect of a respite of even a few months. For it is with these instruments alone that it is possible to extirpate a pyramidal-shaped piece† whose apex shall extend above the base of the vagina, which level in a case anyways far advanced is always overstepped in the vicinity of the cervical canal. Loop and chain cannot be operated above this level, must cut, therefore, through the midst of the disease, and the following development from the cut surface is all the more luxuriant.

For a while, I deceived myself with the idea that, in cases where the vaginal walls were not yet attacked, it would be possible to remove a portion of the corpus uteri by means of a wedge-shaped incision, but the difficulty of the undertaking became evident upon the first attempt at its execution. The enormous hæmorrhage, the impossibility, in the gushing blood, of controlling the instrument by the eye; the necessity of directing scalpel and scissors in the narrow space with the fingers alone; the danger of injury to the neighboring parts (bladder and especially peritoneum); the repeated tearing out of the hooks fixed in the brittle mass; then, too, the threatening danger of serous inflammation which would attend the tamponning or cauterization of the bleeding wound—all caused me to regard the completion of the operation, without imminent danger to the life of the patient, as impossible.

My advice, therefore, is: very early operation, or, where this is not possible, mere treatment of symptoms.

* Loc. Cit.

† Hegar-Verhand. der Gynäkol. Section der Naturforscher-Versammlung zu Innsbruck. Mon. für Geburtsk 34 Band, S. 394–95.

Foreign Correspondence.

AN ACCOUNT OF A NEW SYSTEM FOR DRESSING WOUNDS AND AMPUTATIONS, INTRODUCED BY M. ALPHONSE GUERIN, SURGEON AT THE HOTEL DIEU.

MESSRS. EDITORS,—Under the impression that it may still be new to many of your readers, I venture to send you a short account of a system for dressing wounds and amputations, introduced not long since by M. Alphonse Guérin, Surgeon at the Hotel Dieu, and which is now being quite generally tried in the hospitals here. The dressing is cotton wool, and its application is based upon the now generally well-known property which cotton wool possesses as a filter of atmospheric germs. Your readers will remember the use made of it in Pasteur's famous experiments in regard to spontaneous generation, and Prof. Tyndall's more recent experiments confirming the same properties. The latter has even proposed that it should be adopted as a respirator to render innocuous the poisoned air of sick rooms.

M. Guérin made his first experiments during the first siege of Paris, at the Military Hospital Saint Martin, and continued them during the second siege with success. He has now the service at the Hotel Dieu, which, from the well-known unhealthiness of its wards, gives him an excellent opportunity to put his system to proof. According to M. Guérin, the dressing should fulfil four objects, viz.: it should act as a filter of the air, excluding organic germs, and consequently preventing putrefaction; it should afford an elastic compression to the limb and an equable temperature, and should allow complete repose to the parts during the process of restoration.

When well applied the dressing does fulfil these demands, and in doing so it seems to be the best, as well as the simplest system of treatment of wounds and amputations with which we are acquainted. To attain these results, M. Guérin's formula is, "*il faut mettre trop d'ouate, et serrer trop fort,*" one should put too much cotton wool, and bandage too tightly. In other words, failure is generally the result of putting too little cotton wool, and bandaging too loosely. His measure is that the limb, when bandaged, should have about three times its original size. I have heard of five pounds of cotton wool being applied after an amputation of the leg, but that is more than is usually considered necessary. In a case which I followed, the cotton wool applied after an amputation of the leg, and which reached to the groin, weighed only 785 grammes, about 1¾ pounds. In this case, the details of which I will give below, the condition of the wound and the character of the discharges upon the 24th day, when the dressing was removed for the first time, were most satisfactory.

In those cases which I have seen, the absence of pain, the entire comfort and good general condition of the patient were remarkable. The bandaging is a point of prime importance. In order to put the cotton in a position to act as a filter, and in order to give the proper compression to the parts, several layers of bandages should be firmly and evenly applied. If the bandage is well adjusted, one can tap with considerable force upon the outside of the dressing without causing any unpleasant sensation to the wound; and a patient can often be up and about with a wound which would otherwise necessitate remaining in bed. The gain, both to the patient and to the attendants, from the fact that a wound or amputation which formerly would have been dressed twice a day now requires but once in three, four, or even six weeks, will readily be perceived. I say even six weeks, for the tendency is to leave the first dressing as long as possible, and some cases are reported in M. Guérin's service where it has been allowed to remain from thirty-five to forty-five days. Of course, the bandages should be carefully watched, and readjusted if at all loose. Should the discharge appear to any extent at the surface of the dressing, the latter should, as a rule, be changed. One of the most striking things about the dressing is the very small quantity of discharge which collects, even in the course of several weeks. In the case mentioned as occurring in M. Guyon's service, there had not been more than ℥iij. of pus, including that which had soaked into the dressing, upon its removal after three weeks. The pus generally has a stale but not a putrid smell, and in several cases examined under the microscope gave no evidence of organic germs.

M. Guérin was kind enough to open one of his dressings before me, and pointed to the fact that the inner surface of the cotton wool becomes matted by the perspiration, and so closely adherent to the skin that it is with difficulty removed. In those cases where the dressing has been most successful, he has always found this condition of things. To facilitate it he sometimes applies a solution of gum arabic. M. Guérin takes the

precaution never to apply the dressing in the wards, and to use cotton wool freshly opened. The wound is previously bathed with a solution of camphorated alcohol and water, or with some other antiseptic, and in the case of amputations, especial care is given to tying *all* the vessels. After the application of the bandage, one must, of course, give to the patient all the attention which one usually devotes to the wound when exposed to view, and any change in pulse, temperature, or appetite, should be carefully noted. This being done, one can be quite sure of the condition of the wound.

Whatever merit there is in the *application* of this principle is due to M. Guérin. Mr. Lister has made use of cotton wool, but not in the same way, or to the same extent, and has apparently discarded it altogether, as will be seen by referring to a note upon page 619 of vol. v. of the last edition of "Holmes's System of Surgery." His "antiseptic gauge" may be even more antiseptic than the cotton wool; but it cannot have the other advantages claimed by M. Guérin for the cotton wool of affording elastic compression, equable temperature, and a thorough protection to the part, combined with simplicity of application and comparative cheapness. The apparatus of M. Jules Guérin, described in the *Révue des Cours Scientifiques* of Dec. 14th, 1867, also attains an antiseptic result, but lacks the other advantages offered by this system of M. Alphonse Guérin. I would refer your readers to an article, the first part of which has appeared in the *Archives Générales de Médecine* for Dec., 1871, written by M. Hervey, a former Interne at the Hôpital de Saint Louis, under M. Guérin.

I append an abstract of a case occurring in the service of Dr. Felix Guyon, at the Hôpital Necker, the report of which was kindly furnished me by Mr. T. B. Curtis, Interne. It may be of interest as impartial testimony.

Patient, a carter, æt. 36, strong, healthy man, brought to the hospital Jan. 27th, with a compound, comminuted fracture of tarsus and leg; comminution of the bone, and laceration of soft parts extensive.

Amputation circular at the junction of the third and lower quarters of the leg, with vertical incision upon the internal aspect of the tibia, the latter united by sutures of silver wire. Guérin's bandage applied, about $1\frac{3}{4}$ pounds of cotton wool tightly bandaged as far as the groin; no cotton placed between the flaps. (This, I would add, is contrary to M. Guerin's practice; he always fills the space between the flaps with a cone of cotton.) From the day of the operation, the patient's general condition was excellent; his appetite was good, he slept well, and there was no pain in the stump, which he brandished with impunity. During the first two days, a slight sanguinolent discharge made its appearance at the top of the bandage, near the buttock, but ceased, the bandage being tightened. A very slight discharge had found its way to the surface of the dressing during the last week that it remained in place. The dressing removed February 20th. Condition upon removal:—The cotton wool found dry, but giving out, as removed, a tolerably strong, sour, disagreeable smell, which did not, however, increase as the stump was approached. Upon arriving at the last layers, the cotton was found matted with pus, partly liquid, partly dry, forming a sort of brownish felt, dry upon the outside, moist near the wound, covering like a cap the end of the stump. This cap, about as large as the hand, was separated from the wound at its centre by a brownish pus which bathed the wound, the quantity of which might be reckoned at ℥i. Around the wound, this cap was closely adherent to the skin. The pus, brownish like *chocolat à la crême*, had a pretty strong but not putrid smell. Under the microscope, one found nothing in the discharge except pus cells and an infinite number of fatty granulations; no signs of organic germs. Objective No. 5 of Nachet.

Condition of the wound:—Rosy, neither pale nor red, just sufficient granulations to fill the cone. The extremity of the stump was rounded; the cicatrix will necessarily be central, but the bony extremities were sufficiently covered; no retraction had taken place. The small, vertical incision seemed to have united by first intention. The ligatures, still holding, were left in place. A second dressing was applied similar to the one removed. In this case, the dressings were applied in the ward. The diagram of the pulse and temperature shows that the former never rose above 90 and averaged 75; the maximum of the latter was $38\frac{1}{2}$, Centigrade, and the average $37\frac{6}{8}$. There were, at the same time, in the same ward, two cases of compound, comminuted fracture of the phalanges, the joints being opened. In both cases, the hand was supported by a zinc splint; the one case was dressed with cotton, the other without. The condition of the former has been incomparably better during the treatment.

I should mention the fact that the pro-

cess of granulation is not always so rapid beneath cotton wool as one is at first led to expect, and it is better not to prolong this treatment beyond a certain point. The immense advantage of the system in time of war is apparent, enabling transportation in many cases where it would otherwise be impossible, and thus, by preventing overcrowding, acting both indirectly as well as directly as an antiseptic.

GEORGE B. SHATTUCK.

Paris, March 5, 1872.

Reports of Medical Societies.

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.
F. B. GREENOUGH, M.D., SECRETARY.

DEC. 26th, 1871.—*Rupture of Intestine from external Violence.* Dr. JOHN HOMANS reported the case.

About a week ago he had been called to see a man who had been struck in the abdomen by a piece of board about a yard long, which he had been holding to a circular saw, and which in some way had got caught. When seen, the patient was in great agony, continually changing his position from the bed to the floor and back again, apparently being in less pain when on his elbows and knees. About one grain of morphia was injected subcutaneously, and about two-thirds of a grain more during the night. He was seen every day, and took about one and a half grain of morphia per diem. His urine was albuminous. He gradually sank, and died on Saturday night, the injury having taken place on the previous Tuesday.

There was no external sign of injury. At the autopsy, some gas was found in the peritoneal cavity, and about ʒxii. of fluid, opaque, yellowish fæcal material. The peritoneal surface of the intestine was adherent, for the most part of a deep red color, and covered with thick opaque lymph. Where the convolutions adhered so as to form a sort of cup, and had retained the extravasated intestinal fluids, the peritoneum was sloughy. In the ileum, about three feet from the cœcum, was a rent through the bowel, parallel with the long axis, about half an inch in length, and surrounded by ecchymosis; ten inches higher up, another rent, nearly parallel with the long axis, and one and one fourth inch long. About four feet higher, in the jejunum, were two roundish ruptures, surrounded by sloughy lymph. The mucous membrane of the ileum, at a point about a foot from the ileo-cœcal valve, was of a deep purple for an extent of six inches.

Dr. J. B. S. JACKSON said it was remarkable that the patient should have lived so many days, as it was usual for cases, even where there was only a single rupture, to die within twenty-four hours. He did not know, however, that the fact of there being several ruptures would make the case any graver. The non-existence of any external evidence of injury was also an interesting point. In Mayo's Pathology this is stated to be the usual case, and Dr. Jackson's own experience would confirm that statement, as he has in only two cases seen any external evidence of violence. This does not seem to be generally known, as in Circular No. 3 of the publications of the War Department, in speaking of a case of fracture of the liver, Dr. Otis mentions the fact that no fracture of the ribs was found as something extraordinary.

Dr. FIFIELD quoted some experiments, from the *Dublin Quarterly Review*, with regard to wounds of the intestines. The experiments were performed on dogs, and from them the writer had concluded that when the intestinal wound was longitudinal there was an eversion of the mucous membrane which prevented an escape of the contents of the intestine into the peritoneal cavity, which is not, however, found when the rent is transverse or oblique; hence he concludes that where the wound is less than an inch in length and longitudinal, it should be left without sutures.

Dr. JACKSON could not conceive how, whatever the direction of the rent might be, the contents of the intestine could be retained, as we see in typhoid fever that a perforation even the size of a pin-hole is followed by instant peritonitis. Moreover, he should think that even if this eversion did take place, it would prevent the possibility of the adhesion of the edges of the wound.

DEC. 26*th.*—*Embolism of Left Middle Cerebral Artery.* Dr. LYMAN reported the case.

P. C., painter, æt. 46, entered City Hospital Nov. 18th. Four years previously had rheumatic fever, accompanied or followed by "palpitations of heart," which, however, gave him no serious trouble until last June (six months ago), since which time they have gradually increased in intensity, until, for the past four nights, the dyspnœa has been so urgent as to prevent his lying down. Feet and legs now œdematous; skin natural; tongue clean; bowels regular,

micturition free. Pulse 106, very irregular. Heart's action labored—area of dullness neither enlarged nor displaced. Mitral and aortic murmurs very distinct. Some subcrepitant râles at base of left lung; no cough. Was ordered a diuretic mixture of digitalis squills and hyoscyamus, and a cathartic of compound Jalap powder.

21st.—Anasarca nearly gone; breathing much relieved, but still some dyspnœa in recumbent position.

27th.—Greatly improved; action of heart less labored and irregular, and gets comfortable sleep at night from ten grains of chloral hydrate.

29th.—Complained of distress in hypogastrium, for which he had compound jalap powder, followed by two free dejections and entire relief from pain.

30th.—Complains of pain inside of thighs. Subcutaneous injection of morphine (one-eighth of a grain) gave entire relief, followed by comfortable night's sleep.

Dec. 4th.—The record reports steady improvement. Complains only of debility.

5th.—Not so well. Pulse only 44, intermitting every fourth beat. Digitalis omitted.

7th.—Some fever and pain in epigastrium for past forty-eight hours.

8th.—Begins again to suffer from dyspnœa, but complains of no pain. Tongue coated and dry. Two or three light-colored dejections daily.

9th.—Heart's action slow, labored and intermittent. Aortal direct and mitral regurgitant murmurs much intensified. At 7½, P.M., the house physician was called, and found him in great distress. Only partially conscious, unable to speak or swallow; some low muttering delirium; whole right side paralyzed; face pale, feet cold, pupils somewhat dilated.

10th.—At morning visit, with the students, found him in much the condition above described, partially conscious when spoken to, but unable to speak, except that he once said "what," when called by name. Occasional twitchings of left side of face and body. Right leg cold and pulseless below the knee, and two large purpuric spots, three inches by two, one below inner malleolus and the other about the middle of the inner aspect of the leg, with the epidermis slightly raised by fluid. Embolus of the middle cerebral artery was diagnosticated. The patient gradually failed, and died at 1 o'clock the next morning.

Autopsy by Dr. Webber (ten hours after death).—A little more than one quart of serum in each pleural cavity, with considerable masses of coagula. Right lung adherent by bands to lower part of wall of chest. Both lungs contained old cicatrices at apices.

About ℥i. of serum in pericardium. The surface of pericardium about right auricle, near its junction with ventricle, on the auricular appendix of left auricle and following the vessel, near the division line between the two ventricles, were deposits of lymph; also on the corresponding surface of the mediastinal pericardium.

Heart hypertrophied; right auricle fully distended by decolorized clot, evidently old; right ventricle also containing coagula; left side also contained considerable coagula. Mitral valve rather small for size of heart, admitting only two fingers, and lined with very minute vegetations. Aortic valves thickened, and a few vegetations seen. Walls of ventricles thickened and rather friable.

Liver rather large and mottled. Left kidney had one or two slight spots of hæmorrhagic stasis, probably from very minute embolisms.

Brain.—Rather more serum than usual between the membranes. Puncta vasculosa much more prominent than common. The surface of both cerebra ovalia magna congested, the left more than the right. The left middle cerebral artery plugged after giving off two or three branches. No softening; no yellow discoloration; nothing but congestion of the corresponding hemisphere.

The paralysis and loss of speech and consciousness supervening so suddenly on the 9th, was doubtless due to the detachment of a fibrinous vegetation from left side of heart, which was carried on until its lodgment in the middle cerebral artery, where it was found at the autopsy.

The dilatation of pupils and muscular contractions observed after the paralysis are noticeable as opposed to the train of symptoms quoted from Erlenmeyer by Dr. Hammond. Dr. H. also gives thirty-seven cases from his own practice, all but one associated with organic diseases of the heart, of which in thirty-one the embolus was on the left side. He also quotes forty-two collected by Meissner, of which thirty-four were on the left side.

He said he thought these cases of embolism very interesting, and more common than usually supposed.

Dr. Ellis spoke of a case which he had thought to be embolism of one of the cerebral arteries. An old lady was suddenly seized with hemiplegia, from which she re-

covered in about twenty-four hours, some difficulty in speaking however remaining up to the present time. Her heart was much enlarged, but there was no murmur.

Dr. JACKSON said that he had no doubt of the fact that embolism 'of the cerebral arteries might produce symptoms such as were found in Dr. Lyman's case. He had however been sceptical in this case as to the connection between the brain trouble and the heart, as he had seen nothing on the valves that could be, or any signs of anything having been, detached. Perhaps the clot found in the cavity of the heart might account for the embolus. It is certainly strange that an embolus of so small an artery, in an organ as rich in bloodvessels as the brain is, should produce such results.

Dr. ELLIS said that the cerebral arteries do not anastomose, so that when one of them is plugged up, the entire supply of blood is cut off from parts to which it is distributed.

Dr. LYMAN said that it was not necessary that there should be valvular disease to produce an embolus. An atheromatous condition of the aorta might do so. Dr. Richardson states that an acute inflammation of the serous membranes, the loss of much blood, or a long-existing suppurative disease, may act as predisposing causes to the formation of emboli. The differential diagnosis between an attack of apoplexy and an embolism of the cerebral arteries is given in detail by some authors; the characteristic of the latter being stated to be the suddenness of the attack, loss of speech without loss of consciousness, twitching of the face, &c.

Dr. ELLIS said that on the other hand the symptoms might be just the same. When such a case is seen, if there is known disease of the heart, one is justified in thinking that it probably is a case of embolism. He thought that the distinction between the symptoms of the two diseases was more strongly insisted upon by the authors than was justified by facts.

Dr. WARE thought that in looking back over thirty years' practice, any one could remember cases of an apoplectic nature that recovered entirely. Perhaps these cases now would be referred to embolism. On the other hand, where the attack is due to serious disease of the brain or arteries, although the patient may seem to improve, within a year another attack will follow.

Medical and Surgical Journal.

BOSTON: THURSDAY, APRIL 11, 1872.

PRACTICAL QUESTIONS FOR THE YOUNGER MEMBERS OF THE PROFESSION.—No. II.

How shall I employ my time while I am "waiting for patients?" This is a question which very naturally comes up to the mind of every young man when he finds himself fairly launched in medicine. He may have selected his residence in some populous city, where the shining door-plate marks every third house as a doctor's—quacks perhaps two thirds of them may be, but still, in this land we sometimes call *free*, "doctors" they are and must be. Perhaps his sign is exposed in some town or village, among the mountains or on the prairies; it matters not where it is—wherever our young men are settled, from Maine to California, the same ordeal must be entered on and the same trial must be borne, the same weary waiting for practice.

From a life of comparative activity in study or in hospital work, the young man suddenly finds he has nothing to do; practice is a misnomer; weeks and months go by, patients fail to appear, and, save the merest pittance, no pecuniary reward is received. It is not more sure that every medical student believes himself the victim of heart disease than that the young physician regrets the day when he ever opened an anatomy. He feels himself able and willing to work, but the chance for exertion will not come. The very choicest years of his life are slipping by, and the opportunity to carve out for himself a name and an honorable position *will* not come.

We have not said these things to distress or dishearten our younger friends; they are serious *facts* which are in the experience of every man, and, rather than say less, we should say more, that you will have occasion for such reflections for *years*, unless you are more fortunate than the great proportion of your fellows. One motive for making such remarks, however, is to remind you, in the way of encouragement, that such has been the experience of

all those around you whom you esteem successful physicians, and they have only attained their present position by faithful, honest and persevering work.

Now, how shall the young physician fill this portion of his life record, so that he may benefit himself and his neighbors. To leave the time vacant is impossible; to fill it usefully is in every man's power; to spend it uselessly or culpably would lower the man to the scale of the brute. The first and natural suggestion to make to a literary man is *to study*, a suggestion which might perhaps be rejected by one who feels that he has just *completed* his studies and has happily passed through the curriculum of his student days. Those of us, however, who have been ten years in practice feel that, at the best, we know very little about medicine; that the human body is a tissue of facts of which we are beginning to unravel only the outer meshes; and that, the longer we investigate and the deeper we look, the more intricate and inexplicable the network becomes. Medicine, as studied in many of our schools, is but a very meagre affair, and the review of one text-book on each subject of medical lore gives but a feeble support at the time when the young physician stands at the bedside of his patient. Bring to mind a disease or an injury, simple or complicated, and we shall find that no one of the text-books will give the details of diagnosis, prognosis and treatment in a way to be all sufficient for the physician. The student life of every man gives him simply the skeleton of his life work; he must carefully and thoughtfully study out each disease *in its details;* and, for this purpose, must go beyond the meagre text-books to those special monographs which hard-thinking and hard-working men have elaborated for his use. Still farther than this, he will find in every disease, if he is a careful observer, an infinity of minutiæ and variations which no book *can* give him, and which he must work out by careful thought and clinical observation. This is what we mean by farther study; let the young man fill in, with muscle and sinew and integument the skeleton the professor has builded, and—after all, he may find that he has been tripped up at his first bedside by facts which he thought well fixed in his memory, or to whose existence he has never given a thought.

Farther study does not consist alone in reviewing the accumulated work of the past. Rational or legitimate medicine is constantly new, and claims for its use *any truth*, whatever its nature, which can be proved by the *men of to-day* to be serviceable for the relief of human suffering. It may be as old as Hippocrates or it may be the thought of the youngest medical man; it may have been worked out by the plodding German brain or by any other member of the medical brotherhood; it may be a fact which shall flash upon us, astonished we have not sooner recognized it, or it may show its power by slower stages; but whatever the truth, if truth it once be proved, medicine grasps it and makes it useful. We beg you, as young physicians, in duty to yourselves and to those under your charge, *to keep up with medicine* in these her onward advances, read the best current medical literature of the day; start your medical life by putting yourself, in this way, in communication with the men who are the workers of the *present day;* or else, ten years hence, you will find yourself, where you deserve to be, shelved as "an old-fashioned doctor who does not keep up with the day."

The *thorough* study of the course which his student life laid out for him, while it will recall most of that which is already known on various subjects, will point out to many a thinking man paths for *original investigation and study.* A physician is not generally born a specialist, he rarely becomes one on entering the profession; but some fortuitous circumstance determines him in a certain direction, and thus gives a bent to his mind which may benefit both him and science.

At the present day, *Pathology* offers a large field for original research, and when one has reviewed and rediscovered for himself the facts pointed out by Virchow, or Rindfleisch and Foerster, and a hundred others, there are a host of others still to be solved by the scalpel and the microscope. The *Microscope* opens a world of knowledge which may claim notice from those who are seeking a field for investigation. We may well feel ourselves commencing to grasp

the forces of nature when we resolve the body to its elements and seek, in the ultimate anatomy and physiology of the cell, the sources of life. Most students must ever be plodders on in the footsteps of former investigators; but they will find a new interest in science when they prove for themselves great facts which have already been discovered for them. But, beyond these beaten tracks, there are thousands of by-paths which lead off in various directions and open new views, and, it may be, one, who has been tempted in his early years of medical life over paths already trodden, may find some side way leading to new fields for interesting and valuable original discovery.

Chemistry, clinical medicine, physiology, midwifery, all offer topics to our mind, which might well be made the subject of special study, but for which we have no space at present; nor have we time to speak of other methods of employing his time beside those which may immediately benefit the physician himself. Every medical man is called, in one way or another, to work for the poor, and, though the service seems to many a thankless one, there are rewards and substantial ones for those who take hold of the work with a good heart and willing hand. Dispensaries and organized methods of aiding the sick and destitute offer an abundance of working material in our cities and many of our towns, and everywhere throughout the world the ear of one ready to give assistance can always detect the cry of suffering and want.

Without mentioning numberless other methods of employment which may be resorted to by our young men, we say, only, in conclusion, we have sought to point out *some* methods of *keeping busy* in those early days when time hangs heavily on your hands and inducements are offered on every hand to misspend it. *Keep some useful employment on hand all the time*; no matter whether it promises a large immediate return for labor expended or not; let it be honorable, conscientious and useful work, and the time will come when you will see a result; and we trust you will not regret the judicious employment of your early professional hours.

THE SYPHILIS-CORPUSCLES OF LOSTORFER.—We are informed that the committee of accomplished microscopists appointed from the Boston Society for Medical Observation to investigate the subject of syphilis-corpuscles in the blood have reported, as the unanimous result of their individual and independent researches, that their conclusions are negative; that the bodies described by Lostorfer as peculiar to syphilitic blood were found in the blood of syphilitic patients and of healthy persons as well; and that the so-called corpuscles appear to have their origin in certain physical or chemical changes to which the blood globules are subjected in the course of prolonged microscopic examination.

THE ACTION OF QUININE ON THE WHITE CORPUSCLES OF THE BLOOD.—In order to verify the assertion of Bins on the property possessed by quinine to arrest the movements of the white corpuscles of the blood, and the value of the objection suggested by Professor Stricker that the acid contained in the solution caused the effects obtained, new experiments have been tried. Incited by the observations of Mosler on the cure of certain cases of leukæmia by the administration of quinine, Kerner has employed a neutral salt of quinine, for instance the chloride or the carbonate. Into a small quantity of the blood of a cat and of a dog he introduced at the temperature of the blood a solution of this salt, one part in 10, one part to 4000 of blood. Under the field of the microscope, the result was striking. The white globules became round and obscurely granular; their movements were arrested at once and completely.

Comparing these effects with those of other neutral salts, and pursuing his investigations, Kerner found that salicine, cafeine, atropine and arseniate of potassa were entirely inert, or had but a very feeble action in this direction. Quinine therefore remains the poison for lucocytes *par excellence*, without taking into consideration its antiseptic properties.—*Pfluger Archiv*, from *L'Union Med.*, Feb. 22.

A CORRESPONDENT states that recently he ordered for a gentleman of delicate nervous temperament, forty years of age, half an ounce of hydrate of chloral, dissolved in two ounces of water, to be taken in tea-

spoonful doses hourly until sleep was induced. Either by accident or design, after taking two regular doses, he took the remainder of the contents of the bottle, about 200 grains hydrate chloral, at a draught. When seen an hour afterwards, his head was lying in a quantity of yellow mucus which he had vomited, vomiting still continuing; pulse 40 and scarcely perceptible; inspiration gasping, 10 to the minute; complete insensibility; muscles flaccid, except that jaws were firmly set together, and the eyes wide open with pupils dilated; the nose, ears and extremities were cold, and the face was of a deathly pallor, while a leaden color was about the lips and under the nails.

He was immediately wrapped in warmed blankets. Heat was applied to the extremities; a sinapism over the heart, and an enema of dilute aqua ammonia administered.

Rallying took place very slowly but steadily. The only other treatment he received was ice to the head, and small doses of tartar emetic during the reactionary stage, when the pulse ranged as high as 130.

An Act against Empiricism.—The following are the provisions of an act entitled "an act to protect the citizens of Wyoming Territory from empiricism and elevate the standing of the medical profession."

Section first makes it unlawful for any person to practise medicine or surgery in any of its departments, for reward or compensation, who has not attended two courses of instruction in a school of medicine, or who cannot produce a certificate of qualification from some regular medical society.

Section second makes it incumbent upon all persons now practising medicine or surgery, to file a copy of his or her diploma or certificate with the County Clerk, making oath that they are the *identical* person named in the diploma or certificate.

Section third provides a penalty for a violation of sections one and two, of a fine of fifty to one hundred dollars for the first offence, and imprisonment in the county jail not less than ten days for the second; and in no case wherein this act shall have been violated, shall the person so violating receive any compensation for services rendered.

Section fourth exempts dentists and surgeons of the United States army from complying with the provisions of this act.

The above act was passed by the late Legislature, signed by the Governor, and is now the law.—*Medical and Surgical Reporter.*

On Sick-Headache. By Samuel Wilkes, M.D., F.R.C.P., F.R.S., Physician to and Lecturer on Medicine at Guy's Hospital.—The true cause of sick-headache lies deep in the patient's idiosyncrasy, and is developed by a hundred different causes. The advice, then, to sufferers, is to give as much tone as they can to their nerves by adopting all those methods which experience has shown to be good, and then avoid as far as is practicable, all those causes which are known to excite an attack. I need scarcely describe a sick-headache—how one rises in the morning more dead than alive, perfectly unable to swallow the smallest particle of food, and often perhaps actually sick; how the head throbs, and the pain increased by the slightest movement; how speaking or doing is a burden beyond bearing; how one prays to be left alone in the utmost quiet, so that he may, if possible, sleep. To other persons the sufferer looks extremely ill, very pale, dark around the eyes, and with contracted pupil. To himself his head feels hot, and the application of cold is most refreshing. The clamminess in the mouth, the nausea, and general gastric disturbance, are secondary, and have no connection with any improper meal, and thus is in no way relieved by the too frequent and ignorantly administered purgative. This is not needed, and has no good result. The only remedies which are of any avail are those which act on the nervous system, such as hot tea and coffee; or, after the stomach is quieter, and the more urgent symptoms have passed off, a little wine or ammonia. If the headache take more the form of hemicrania, then remedies are occasionally useful, as the local application of the bisulphide of carbon, or galvanism, and internally the bromide of potassium. This is the only drug which I have really seen to be serviceable. Whilst the nausea exists and the worst symptoms prevail, even this remedy is of no avail—*British Med. Journal.*

Control of Hemorrhage by Ipecac.—Dr Martin reports to the *New York Medical Journal* a case of capillary hæmorrhage controlled by small doses of ipecac, given until vomiting occurred. The tonsil had been injured, and ordinary styptics not proving efficacious, recourse was had to ipecac. As soon as vomiting occurred, after two-grain doses of the medicine given every two hours, the hæmorrhage was effectually checked.—*New York Medical Journal.*

Medical Miscellany.

Operations Performed under the Influence of Ether at St. George's Hospital.—The numerous fatal cases following the administration of chloroform which have been recorded seem to have induced some of the London surgeons to try again *ether* as an anæsthetic agent. In the *Lancet* for Dec. 2, 1871, are recorded some cases of this kind, and it is remarked: "Excepting that for harelip, all these operations were performed during anæsthesia produced by ether apparently with as much ease and rapidity as is usual with chloroform. In two cases, those of adults, in which the time was noted, insensibility was produced in five and four minutes and a half respectively. The inhaler employed by Mr. Haward consisted of a cone of felt, into which a small sponge was introduced, and which was so constructed that the ether could not drain down on to the patient's face. One child vomited some undigested food, but sickness did not occur in any of the other cases.

"The only outward difference between the administration of ether and that of chloroform appeared to be the more frequent replenishment of the inhaler, and the very appreciable extent to which the theatre became pervaded with the vapor of the anæsthetic."—*Med. News and Library.*

Lunar Obstetrics.—Dr. Michel, of Cherbourg (*L'Union Médicale*, Feb. 1872), adds one more to the superstitions of the lying-in room enumerated by Dr. Symes Saunders in the Journal of Feb. 10th. When the moon does not change in the nine days which follow an accouchement, the sex of the next child will be the same as that of the preceding one. Dr. Michel even takes this seriously, and affirms that he has verified it by collecting old almanacs and interrogating all the ladies he knew, and "even those he did not know," who were a little astonished at his questions. Not content with verifying, he has prophesied on these data, and always correctly. He notes, however, the intervention of *miscarriages* as a disturbing element in the calculation, for the embryos have a sex which must be counted. He invites his colleagues to collect their old almanacs, and to join in a statistic which he believes will lead them to the same profound conviction in which they have landed him. If the lunar influence seem a little far-fetched, he appeals to the menstrual periodicity as a collatteral and attenuating base for the fancy.—*Brit. Med. Jour.*

Prodigious Gall Stones.—At a recent meeting of the London Pathological Society, Dr. Thorowgood exhibited, for Dr. Locke Johnson, two gall stones which he removed from a female patient, aged 67, and who suffered no inconvenience from their presence during her lifetime. They completely occluded the gall bladder; assumed its shape; were composed principally of cholesterine, and weighed, at the period of removal, 580 grains, the larger of the two weighing 420 grains.—*Med. Press and Circular.*

Mrs. Keep, widow of the late Henry Keep, of New York city, has given $100,000 to the Ophthalmic Hospital for the purpose of enlarging its accommodations and making provision for the reception of free patients.—*Med. and Surg. Rep.*

To Correspondents.—Communications accepted:—Irritable Uterus.—Case of Retained Placenta.—Case of Pregnancy with unruptured Hymen.—Ramollissement Rouge.—The Lostorfer Corpuscles.—Cases of Tracheotomy.

Book Received.—Annual Report of the Board of Regents of the Smithsonian Institution, showing the Operations, Expenditures and Condition of the Institution for the year 1870. Washington. Pp. 494.

Pamphlets Received.—The Transactions of the New York Academy of Medicine. Vol. III. Part 11. On Diabetes, by Gouverneur M. Smith, M.D. Pp. 47.—On the Uses and Derangements of the Glycogenic Function of the Liver. By Gouverneur M. Smith, M.D., New York. Pp. 11.—Report of the State of the New York Hospital and Bloomingdale Asylum, for the year 1871. Pp. 24.—Defence of Taxis in Strangulated Hernia. By C. C. F. Gay, M.D., Buffalo, N. Y. Pp. 8.—Proceedings of the Twenty-first Annual Meeting of the New York State Homœopathic Medical Society, held at Albany, on Tuesday and Wednesday, Feb. 13 and 14, 1872. Pp. 11.

Married,—In this city, April 2d, John S. H. Fogg, M.D., to Mary Griselda, daughter of Rev. J. H. Clinch, all of this city.

Deaths in fifteen Cities and Towns of Massachusetts for the week ending April 6, 1872.

Cities and Towns.	*No. of Deaths.*
Boston	154
Charlestown	15
Worcester	29
Lowell	11
Milford	7
Cambridge	15
Salem	11
Lawrence	7
Springfield	8
Lynn	16
Fitchburg	5
Newburyport	7
Fall River	9
Haverhill	9
Holyoke	4
	307

Prevalent Diseases.	
Consumption	51
Pneumonia	42
Scarlet fever	15
Smallpox	12
Croup and Diphtheria	10
Typhoid Fever	8
Measles	6

There were ten deaths in Boston and two in Fitchburg from smallpox. The deaths from measles were all in Boston.

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending Saturday, April 6th, 154. Males, 84; females, 70. Accident, 3—apoplexy, 6—asthma, 1—anæmia, 1—inflammation of the bowels, 1—bronchitis, 5—congestion of the brain, 2—disease of the brain, 9—burned, 1—cerebro-spinal meningitis, 1—cancer, 4—cyanosis, 1—consumption, 25—convulsions, 3—croup, 3—debility, 4—diarrhœa, 1—dropsy, 2—dropsy of the brain, 3—diphtheria, 1—epilepsy, 1—scarlet fever, 8—typhoid fever, 2—disease of the heart, 3—intemperance, 2—disease of the kidneys, 4—congestion of the lungs, 5—inflammation of the lungs, 12—marasmus, 1—measles, 6—old age, 8—paralysis, 3—pleurisy, 1—premature birth, 1—peritonitis, 2—puerperal disease, 1—pyæmia, 1—rheumatism, 1—smallpox, 10—unknown, 6.

Under 5 years of age, 53—between 5 and 20 years, 21—between 20 and 40 years, 31—between 40 and 60 years, 20—above 60 years, 29. Born in the United States, 102—Ireland, 42—other places, 10.